

District I

1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

AS-DRILLED

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

CONFIDENTIAL

Form C-102

Revised August 1, 2011

Submit one copy to appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-31151	² Pool Code 19859	³ Pool Name Dufer's Point
⁴ Property Code 40078	⁵ Property Name CLU 2507 33 513	
⁷ OGRID No. 208706	⁸ Operator Name HUNTINGTON ENERGY, LLC	
		⁶ Well Number 1H
		⁹ Elevation 6986

¹⁰ Surface Location

UI, or Lot No.	Section	Township	Range	Lot Idn.	Feet from the	North/South Line	Feet from the	East/West Line	County
P	33	25 N	7 W		505	South	158	East	Rio Arriba

¹¹ Bottom Hole Location If Different From Surface

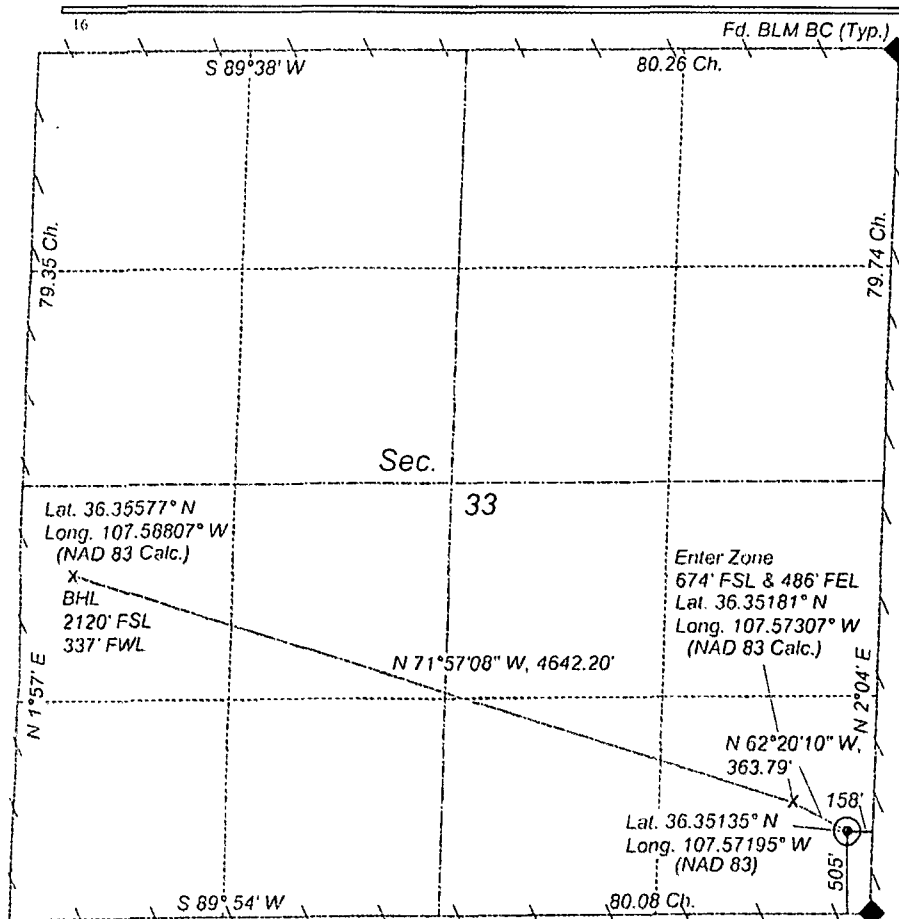
UI, or Lot No.	Section	Township	Range	Lot Idn.	Feet from the	North/South Line	Feet from the	East/West Line	County
L	33	25 N	7 W		2120	South	337	West	Rio Arriba

¹² Dedicated Acres 640	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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RCVD DEC 4 '13
OIL CONS. DIV.

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

DIST. 3

¹⁷ OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Catherine Smith 11/11/13
Signature Date

Catherine Smith

Printed Name

csmith@huntingtonenergy.com

E-mail Address

¹⁸ SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date of Survey

Signature and Seal of Professional Surveyor

#8466

William E. Mahnke

Certificate Number

Professional License

Rev. 05 Nov 2013

Downhole information provided by Wolverine Directional, LLC
Field verification is not possible.

N

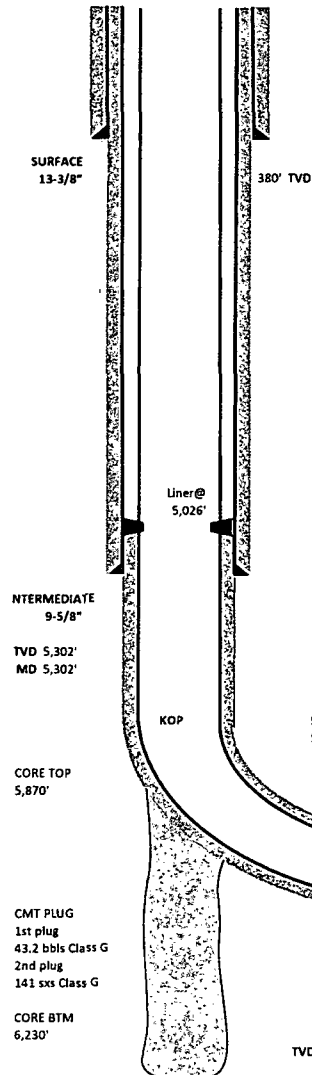
OPERATOR
Huntington Energy LLC

WELLHEAD DATA	
TYPE	
PRESS	
WH 1	13-5/8" 3M x 13-5/8" SOW A Section
WH 2	7-1/16" 5M x 11" 3M B- Section
TBG HANGER	

LOCATION 25N - 7W Section 33		LEASE / WELL NAME Canyon Largo Unit 2507 33 #1H			SURFACE LOCATION S05° FSL & 158° FEL		
COUNTY / STATE Rio Arriba, NM		GL 6986'	LAT 36.35135	LONG 107.57195	API 30-039-31151		
TUBULAR DATA							
	SIZE	WEIGHT	GRADE	THREAD	MD	TVD	TOL
CONDUCTOR							
SURFACE	13-3/8"	48#	H-40	STC	380'	380'	
INTERMEDIATE	9-5/8"	40#	N-80	LTC	5,302'	5,302'	
INTERMEDIATE 2							
INTERMEDIATE 3							
PRODUCTION	5-1/2"	17#	N-80	BTC	10,842'	6,061'	
PACKER OR TIE BACK	5-1/2"				5,026'	5,026'	
TUBING							

DATE	12/4/2013
WB BY:	D. HERRITT

COMMENTS	
Vertical Core taken. 4 cores from 5870' - 6230'. Spud 17-1/2" ho	
@ 4:00 hrs 8/22/13. No GO on liner is 5,029'	



Formation	TVD
San Jose	Surface
Ojo Alamo	1,906
Kirtland	2,072
Fruitland	
Pictured Cliffs	2,506
Lewis Shale	2,606
Huerfano Bent	
Chacra	3,334
Cliffhouse	4,070
Menefee	4,102
Point Lookout	4,800
Mancos	5,054
Gallup	
Landing Target	6,070
HZ Target	6,075

[illegible]

NO.	SURFACE DRILLING DATA	
	HOLE SIZE: 17-1/2"	
	DRILLING FLUID: Fresh water MW 8.3-9.0, Vis 28-32	
	CEMENT: 480 SXS Class G Cmt. Circulated Cmt	
NO.	INTERMEDIATE DRILLING DATA	
	HOLE SIZE: 12-1/4"	
	DRILLING FLUID: Water Base Mud. MW 8.8-9.5, Vis 40-55	
	CEMENT: LEAD 436 bbls, 1275 sxs, TAIL 62 bbls, 300 sxs. Dis not circ. Tag @ 40' with 1". Cmt 32 sxs and circ 1 bbl	
NO.	PRODUCTION DRILLING DATA	
	HOLE SIZE: 8-3/4"	DRILLING FLUID
	FLUID: Oil Base Mud MW 8.0-8.5	
	CEMENT: LEAD 670 sxs, 170.6 bbls Foamed lead cmt w/ poz prem 50/50-sbm TAIL 110 sxs, 25 bbls poz prem 50/50 -sbm	

PRODUCTION
5-1/2"

CSG TVD
6,061'

CSG MD
10,842'

Drill Depth
10,850'

Drill Depth
10,850'

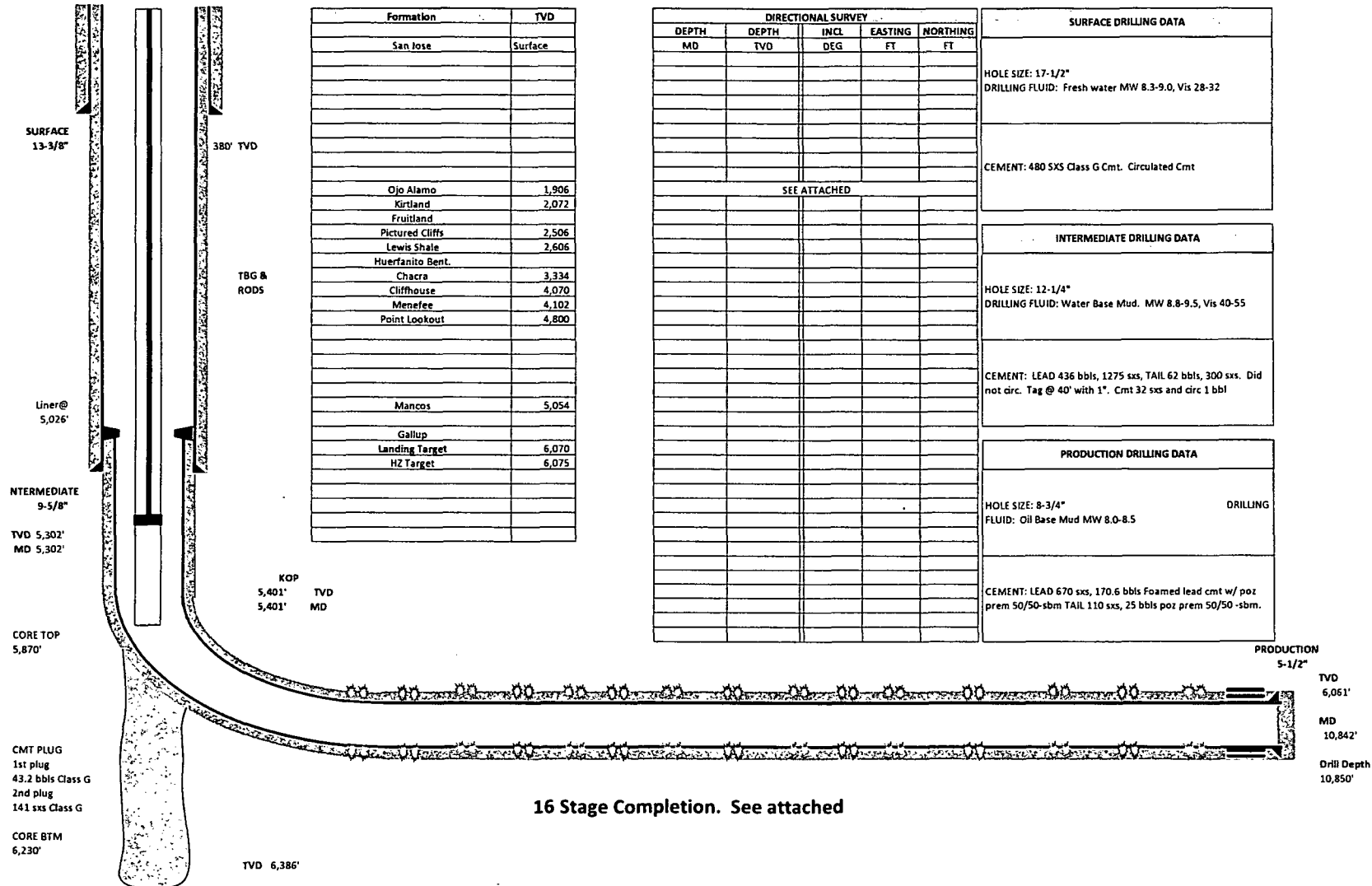
COMPLETION ACTUAL

OPERATOR
Huntington Energy LLC

LOCATION 25N - 7W Section 33		LEASE / WELL NAME Canyon Largo Unit 2507 33 #1H			SURFACE LOCATION 505' FSL & 158' FEL		DATE 12/4/2013	
		COUNTY / STATE Rio Arriba, NM			API 30-039-31151		WB BY: E. ESTRADA	
WELLHEAD DATA		TUBULAR DATA						
			SIZE	WEIGHT	GRADE	THREAD	MD	TVD
TYPE		CONDUCTOR						
PRESS		SURFACE	13-3/8"	48#	H-40	STC	380'	380'
WH 1	13-5/8" 3M x 13-5/8" SOW A Section	INTERMEDIATE	9-5/8"	40#	N-80	LTC	5,302'	5,302'
WH 2	7-1/16" 5M x 11" 3M B-Section	INTERMEDIATE 2						
		INTERMEDIATE 3						
		PRODUCTION	5-1/2"	17#	N-80	BTC	10,842'	6,061'
		PACKER OR TIE BACK	5-1/2"				5,026'	5,026'
TBG HANGER		TUBING	2-7/8"	6.5#		8 RD EUE	5,708'	4996'

COMMENTS	
Vertical Core taken. 4 cores from 5870' - 6230'. Spud 17-1/2" hole @ 4:00 hrs 8/22/13. No GO on liner is 5.029'. TBG and RODS: 2-7/8" Mud Anchor @5744'. Perf sub @ 5708, SN @5707, TA@ 5365'. 2-1/2"x2"x20" RXBC 2 Stage HBR pump. (9) 1-1/4" K Bars, (68) X 3/4", (76) X 7/8", (73) 1" Rods, 22-1-1/4" Polish Rod.	

COMMENTS
Vertical Core taken. 4 cores from 5870' - 6230'. Spud 17-1/2" hole @ 4:00 hrs 8/22/13. No GO on liner is 5,029'. TGB and RODS: 2-7/8" Mud Anchor @ 5744'. Perf sub @ 5708, SN @ 5707, TA @ 5365'. 2-1/2"x2"x20" RXBC 2 Stage HBR pump. (9) 1-1/4" X Bars, (68) X 3/4", (76) X 7/8", (73) 1" Rods, 22-1-1/4" Polish Rod.





A Schlumberger Company

October 24, 2013

CONFIDENTIAL

RCVD DEC 4 '13
OIL CONS. DIV.
DIST. 3

HUNTINGTON ENERGY, LLC
908 NW 71ST ST.
OKLAHOMA CITY, OK 73116

RE: HUNTINGTON ENERGY, LLC
JE COX 3307HU
Canyon Largo Unit CLU 2507 33 513 1H
Dufers Point (Gallup)
D&J 2
Rio Arriba, NM
API No.: 30-039-31151
PES File No.: 13MLD0617

Enclosed, please find the original and one copy of the survey performed on the referenced well by Schlumberger Technology Corp. Other information required by your office is as follows:

<u>Name & Title of Surveyor</u>	<u>Drainhole Number</u>	<u>Surveyed Depths</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
Magsud Aliyev Field Engineer	Original Hole	5423 - 10770	9/15/13 to 9/24/13	MWD



KIRK DAVIS
M/LWD Service Coordinator



A Schlumberger Company

STATE OF TEXAS
MIDLAND COUNTY

I, **Magsud Aliyev** certify that; I am employed by PathFinder, a Schlumberger company; that I did on the day(s) of **9/15/13** through **9/24/13** conduct or supervise the taking of a **Measurement While Drilling** survey from a depth of **5423 feet** to a depth of **10770 feet**; that the data is true, correct, complete and within the limitations of the tool as set forth by PathFinder, a Schlumberger company; that I am authorized and qualified to make this report; that this survey was conducted at the request of **HUNTINGTON ENERGY, LLC** for the **CANYON LARGO UNIT CLU 2507 33 513 1H** Well API No. **30-039-31151** in **RIO ARRIBA, NEW MEXICO**; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by PathFinder, a Schlumberger company.

Magsud Aliyev
Field Engineer

Subscribed and Sworn to before me this 24th day of October, 2013.

My Commission expires:

September 5, 2016

Notary Public





Company: Huntington Energy LLC
Lease/Well: Canyon Largo Unit/2507 33 513 No. 001H

Rig Name: D&J #2
State/County: New Mexico/La Plata
Latitude: 36.351, Longitude: -107.572
GRID North is 0.000 Degrees West of True North
VS-Azi: 0.000 Degrees



Depth Reference : RKB= 12 Feet

DRILLLOG MS GYRO SURVEY CALCULATIONS

Filename: msgyro to 6400-de_01.ut

Minimum Curvature Method

Report Date/Time: 9/27/2013 / 09:41

Vaughn Energy Services

Henderson, Colorado

866-835-8333

Surveyor: Randy Holcomb

Canyon Largo Unit 2507 33 513 No. 001H / API 30-039-31151

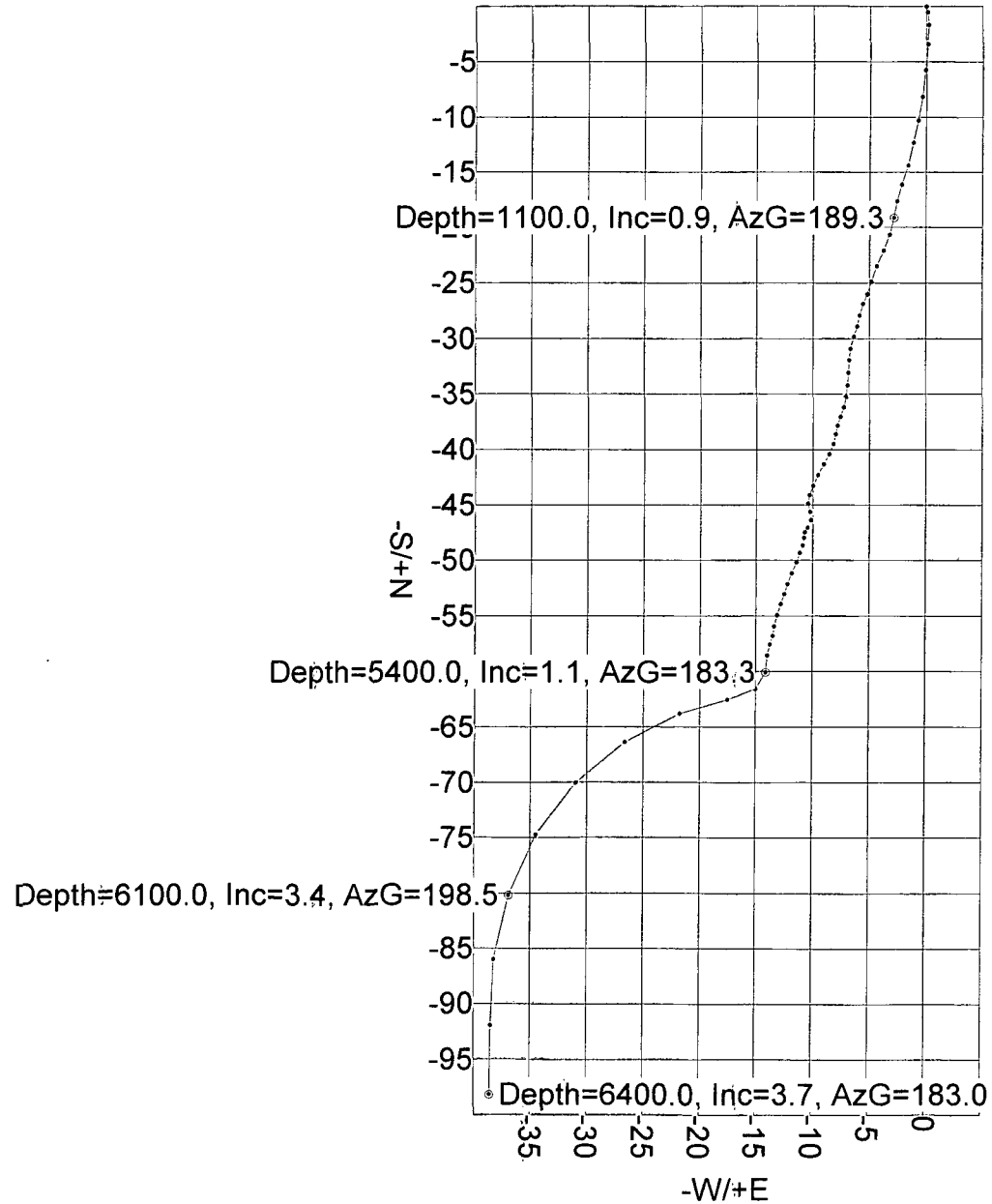
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	****
100.000	0.629	170.278	99.998	-0.541	0.093	-0.541	0.549	170.278	0.629
200.000	0.685	178.102	199.991	-1.680	0.205	-1.680	1.692	173.033	0.105
300.000	1.318	185.997	299.976	-3.421	0.105	-3.421	3.422	178.243	0.646
400.000	1.363	185.554	399.948	-5.748	-0.130	-5.748	5.750	181.299	0.046
500.000	1.403	186.513	499.919	-8.149	-0.384	-8.149	8.158	182.700	0.047
600.000	1.066	193.353	599.896	-10.270	-0.738	-10.270	10.297	184.110	0.368
700.000	1.305	189.487	699.874	-12.298	-1.141	-12.298	12.351	185.298	0.252
800.000	1.166	196.149	799.851	-14.398	-1.611	-14.398	14.488	186.385	0.199
900.000	0.937	198.140	899.834	-16.153	-2.149	-16.153	16.295	187.577	0.232
1000.000	0.845	193.051	999.822	-17.648	-2.570	-17.648	17.834	188.285	0.121
1100.000	0.902	189.289	1099.811	-19.143	-2.863	-19.143	19.356	188.507	0.081
1200.000	0.876	197.614	1199.799	-20.649	-3.222	-20.649	20.898	188.868	0.132
1300.000	0.868	203.829	1299.787	-22.070	-3.759	-22.070	22.388	189.666	0.095
1400.000	0.879	202.719	1399.775	-23.470	-4.361	-23.470	23.872	190.526	0.020
1500.000	0.838	194.430	1499.764	-24.885	-4.839	-24.885	25.352	191.005	0.130
1600.000	0.518	202.658	1599.757	-26.011	-5.196	-26.011	26.525	191.296	0.334
1700.000	0.563	203.395	1699.753	-26.879	-5.565	-26.879	27.449	191.697	0.045
1800.000	0.703	191.819	1799.747	-27.930	-5.886	-27.930	28.543	191.900	0.189

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1900.000	0.436	194.087	1899.742	-28.900	-6.104	-28.900	29.537	191.926	0.268
2000.000	0.690	198.783	1999.737	-29.839	-6.390	-29.839	30.516	192.088	0.257
2100.000	0.605	192.437	2099.730	-30.925	-6.698	-30.925	31.642	192.221	0.110
2200.000	0.586	179.179	2199.725	-31.952	-6.804	-31.952	32.669	192.022	0.139
2300.000	0.705	186.310	2299.719	-33.075	-6.865	-33.075	33.780	191.725	0.143
2400.000	0.599	180.113	2399.712	-34.209	-6.933	-34.209	34.905	191.457	0.127
2500.000	0.616	194.725	2499.707	-35.252	-7.071	-35.252	35.954	191.342	0.156
2600.000	0.507	192.438	2599.702	-36.204	-7.303	-36.204	36.933	191.404	0.112
2700.000	0.524	204.980	2699.698	-37.051	-7.591	-37.051	37.820	191.579	0.114
2800.000	0.446	189.140	2799.694	-37.850	-7.846	-37.850	38.654	191.712	0.154
2900.000	0.446	192.437	2899.691	-38.614	-7.992	-38.614	39.432	191.693	0.026
3000.000	0.611	193.003	2999.687	-39.512	-8.195	-39.512	40.353	191.718	0.165
3100.000	0.541	214.115	3099.682	-40.422	-8.580	-40.422	41.323	191.984	0.222
3200.000	0.627	202.161	3199.677	-41.320	-9.051	-41.320	42.300	192.356	0.149
3300.000	0.640	211.209	3299.671	-42.305	-9.547	-42.305	43.369	192.717	0.101
3400.000	0.593	198.343	3399.665	-43.274	-9.999	-43.274	44.414	193.011	0.146
3500.000	0.418	202.036	3499.661	-44.103	-10.299	-44.103	45.289	193.144	0.178
3600.000	0.496	179.934	3599.658	-44.873	-10.435	-44.873	46.071	193.091	0.191
3700.000	0.405	148.805	3699.655	-45.608	-10.252	-45.608	46.746	192.668	0.257
3800.000	0.518	194.027	3799.652	-46.350	-10.178	-46.350	47.454	192.385	0.370
3900.000	0.362	215.357	3899.649	-47.046	-10.470	-47.046	48.197	192.547	0.224
4000.000	0.195	203.149	3999.648	-47.460	-10.720	-47.460	48.656	192.728	0.176
4100.000	0.394	179.449	4099.647	-47.961	-10.784	-47.961	49.158	192.672	0.229
4200.000	0.397	199.016	4199.644	-48.632	-10.893	-48.632	49.837	192.626	0.134
4300.000	0.429	201.618	4299.642	-49.308	-11.144	-49.308	50.551	192.736	0.037
4400.000	0.612	197.660	4399.637	-50.165	-11.444	-50.165	51.454	192.851	0.186
4500.000	0.626	207.775	4499.632	-51.158	-11.861	-51.158	52.515	193.054	0.110
4600.000	0.586	192.216	4599.626	-52.141	-12.224	-52.141	53.555	193.194	0.169
4700.000	0.490	203.751	4699.622	-53.032	-12.505	-53.032	54.486	193.268	0.144
4800.000	0.596	195.079	4799.617	-53.926	-12.812	-53.926	55.427	193.365	0.134
4900.000	0.607	198.494	4899.612	-54.930	-13.115	-54.930	56.474	193.429	0.038
5000.000	0.592	191.397	4999.606	-55.940	-13.386	-55.940	57.519	193.457	0.076
5100.000	0.419	186.319	5099.602	-56.810	-13.528	-56.810	58.398	193.394	0.178
5200.000	0.493	205.116	5199.599	-57.563	-13.751	-57.563	59.183	193.435	0.166
5300.000	0.681	187.378	5299.594	-58.543	-14.010	-58.543	60.196	193.459	0.259
5400.000	1.064	183.336	5399.582	-60.059	-14.141	-60.059	61.701	193.249	0.387
5500.000	1.185	234.716	5499.565	-61.583	-15.039	-61.583	63.393	193.723	0.981
5600.000	1.955	258.225	5599.528	-62.528	-17.553	-62.528	64.945	195.680	0.989
5700.000	3.116	250.245	5699.429	-63.795	-21.781	-63.795	67.411	198.851	1.211

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
5800.000	3.249	234.212	5799.276	-66.371	-26.638	-66.371	71.517	201.868	0.897
5900.000	3.294	225.463	5899.114	-70.044	-30.985	-70.044	76.591	203.863	0.501
6000.000	3.475	209.160	5998.942	-74.706	-34.510	-74.706	82.291	204.794	0.976
6100.000	3.418	198.503	6098.762	-80.179	-36.932	-80.179	88.276	204.732	0.642
6200.000	3.437	186.758	6198.584	-85.983	-38.231	-85.983	94.099	203.972	0.701
6300.000	3.448	178.441	6298.405	-91.965	-38.502	-91.965	99.700	202.717	0.499
6400.000	3.668	183.023	6398.212	-98.165	-38.589	-98.165	105.478	201.460	0.360



Vaughn Energy Services
Henderson, Colorado
866-835-8333
Surveyor: Randy Holcomb
Canyon Largo Unit 2507 33 513 No. 001H / API 30-039-31151



VES Survey Date: 09/07/2013

RCVD DEC 4 '13
OIL CONS. DIV.
DIST. 3

CONFIDENTIAL

Huntington Energy

Rio Arriba (NM83C)

Sec 33-T25N-R7W

CLU #5-13H

Wellbore #1

Survey: MWD Surveys

Standard Survey Report

24 September, 2013

Wolverine Directional, LLC

Survey Report

Company:	Huntington Energy	Local Co-ordinate Reference:	Well CLU #5-13H
Project:	Rio Arriba (NM83C)	TVD Reference:	WELL @ 0.0ft (Original Well Elev)
Site:	Sec 33-T25N-R7W	MD Reference:	WELL @ 0.0ft (Original Well Elev)
Well:	CLU #5-13H	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 2003.21 Single User Db

Design	Wellbore #1			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	288.07

Survey Program	Date 09/24/13			
From	To	Survey (Wellbore)	Tool Name	Description
(ft)	(ft)			
100.0	10,850.0	MWD Surveys (Wellbore #1)	mwd	MWD - Standard

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.63	170.28	100.0	-0.5	0.1	-0.3	0.63	0.63	0.00
200.0	0.69	178.10	200.0	-1.7	0.2	-0.7	0.11	0.06	7.82
300.0	1.32	186.00	300.0	-3.4	0.1	-1.2	0.65	0.63	7.90
400.0	1.36	185.55	399.9	-5.7	-0.1	-1.7	0.05	0.05	-0.44
500.0	1.40	186.51	499.9	-8.1	-0.4	-2.2	0.05	0.04	0.96
600.0	1.07	193.35	599.9	-10.3	-0.7	-2.5	0.37	-0.34	6.84
700.0	1.30	189.49	699.9	-12.3	-1.1	-2.7	0.25	0.24	-3.87
800.0	1.17	196.15	799.9	-14.4	-1.6	-2.9	0.20	-0.14	6.66
900.0	0.94	198.14	899.8	-16.2	-2.1	-3.0	0.23	-0.23	1.99
1,000.0	0.84	193.05	999.8	-17.6	-2.6	-3.0	0.12	-0.09	-5.09
1,100.0	0.90	189.29	1,099.8	-19.1	-2.9	-3.2	0.08	0.06	-3.76
1,200.0	0.88	197.61	1,199.8	-20.6	-3.2	-3.3	0.13	-0.03	8.33
1,300.0	0.87	203.83	1,299.8	-22.1	-3.8	-3.3	0.09	-0.01	6.22
1,400.0	0.88	202.72	1,399.8	-23.5	-4.4	-3.1	0.02	0.01	-1.11
1,500.0	0.84	194.43	1,499.8	-24.9	-4.8	-3.1	0.13	-0.04	-8.29
1,600.0	0.52	202.66	1,599.8	-26.0	-5.2	-3.1	0.33	-0.32	8.23
1,700.0	0.56	203.40	1,699.8	-26.9	-5.6	-3.0	0.05	0.05	0.74
1,800.0	0.70	191.82	1,799.7	-27.9	-5.9	-3.1	0.19	0.14	-11.58
1,900.0	0.44	194.09	1,899.7	-28.9	-6.1	-3.2	0.27	-0.27	2.27
2,000.0	0.69	198.78	1,999.7	-29.8	-6.4	-3.2	0.26	0.25	4.70
2,100.0	0.60	192.44	2,099.7	-30.9	-6.7	-3.2	0.11	-0.09	-6.35
2,200.0	0.59	179.18	2,199.7	-32.0	-6.8	-3.4	0.14	-0.02	-13.26
2,300.0	0.70	186.31	2,299.7	-33.1	-6.9	-3.7	0.14	0.12	7.13
2,400.0	0.60	180.11	2,399.7	-34.2	-6.9	-4.0	0.13	-0.11	-6.20
2,500.0	0.62	194.72	2,499.7	-35.3	-7.1	-4.2	0.16	0.02	14.61
2,600.0	0.51	192.44	2,599.7	-36.2	-7.3	-4.3	0.11	-0.11	-2.29
2,700.0	0.52	204.98	2,699.7	-37.1	-7.6	-4.3	0.11	0.02	12.54
2,800.0	0.45	189.14	2,799.7	-37.8	-7.8	-4.3	0.15	-0.08	-15.84
2,900.0	0.45	192.44	2,899.7	-38.6	-8.0	-4.4	0.03	0.00	3.30
3,000.0	0.61	193.00	2,999.7	-39.5	-8.2	-4.5	0.17	0.17	0.57
3,100.0	0.54	214.12	3,099.7	-40.4	-8.6	-4.4	0.22	-0.07	21.11
3,200.0	0.63	202.16	3,199.7	-41.3	-9.1	-4.2	0.15	0.09	-11.95
3,300.0	0.64	211.21	3,299.7	-42.3	-9.5	-4.0	0.10	0.01	9.05
3,400.0	0.59	198.34	3,399.7	-43.3	-10.0	-3.9	0.15	-0.05	-12.87
3,500.0	0.42	202.04	3,499.7	-44.1	-10.3	-3.9	0.18	-0.18	3.69
3,600.0	0.50	179.93	3,599.7	-44.9	-10.4	-4.0	0.19	0.08	-22.10
3,700.0	0.41	148.81	3,699.7	-45.6	-10.3	-4.4	0.26	-0.09	-31.13
3,800.0	0.52	194.03	3,799.7	-46.4	-10.2	-4.7	0.37	0.11	45.22

Wolverine Directional, LLC

Survey Report

Company: Huntington Energy	Local Co-ordinate Reference: Well CLU #5-13H
Project: Rio Arriba (NM83C)	TVD Reference: WELL @ 0.0ft (Original Well Elev)
Site: Sec 33-T25N-R7W	MD Reference: WELL @ 0.0ft (Original Well Elev)
Well: CLU #5-13H	North Reference: True
Wellbore: Wellbore #1	Survey Calculation Method: Minimum Curvature
Design: Wellbore #1	Database: EDM 2003.21 Single User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,900.0	0.36	215.36	3,899.6	-47.0	-10.5	-4.6	0.22	-0.16	21.33
4,000.0	0.20	203.15	3,999.6	-47.5	-10.7	-4.5	0.18	-0.17	-12.21
4,100.0	0.39	179.45	4,099.6	-48.0	-10.8	-4.6	0.23	0.20	-23.70
4,200.0	0.40	199.02	4,199.6	-48.6	-10.9	-4.7	0.13	0.00	19.57
4,300.0	0.43	201.62	4,299.6	-49.3	-11.1	-4.7	0.04	0.03	2.60
4,400.0	0.61	197.66	4,399.6	-50.2	-11.4	-4.7	0.19	0.18	-3.96
4,500.0	0.63	207.78	4,499.6	-51.2	-11.9	-4.6	0.11	0.01	10.12
4,600.0	0.59	192.22	4,599.6	-52.1	-12.2	-4.5	0.17	-0.04	-15.56
4,700.0	0.49	203.75	4,699.6	-53.0	-12.5	-4.6	0.14	-0.10	11.54
4,800.0	0.60	195.08	4,799.6	-53.9	-12.8	-4.5	0.13	0.11	-8.67
4,900.0	0.61	198.49	4,899.6	-54.9	-13.1	-4.6	0.04	0.01	3.42
5,000.0	0.59	191.40	4,999.6	-55.9	-13.4	-4.6	0.08	-0.02	-7.10
5,100.0	0.42	186.32	5,099.6	-56.8	-13.5	-4.8	0.18	-0.17	-5.08
5,200.0	0.49	205.12	5,199.6	-57.6	-13.8	-4.8	0.17	0.07	18.80
5,300.0	0.68	187.38	5,299.6	-58.5	-14.0	-4.8	0.26	0.19	-17.74
5,400.0	1.10	183.30	5,399.6	-60.1	-14.1	-5.2	0.42	0.42	-4.08
Tie on to GYRO									
5,423.0	1.58	272.01	5,422.6	-60.3	-14.5	-4.9	8.28	2.09	385.70
First MWD Survey									
5,455.0	2.11	270.65	5,454.6	-60.3	-15.5	-4.0	1.66	1.66	-4.25
5,487.0	3.52	288.48	5,486.5	-60.0	-17.0	-2.4	5.14	4.41	55.72
5,519.0	6.77	300.58	5,518.4	-58.7	-19.6	0.4	10.65	10.16	37.81
5,550.0	10.38	304.49	5,549.0	-56.2	-23.5	4.9	11.79	11.65	12.61
5,582.0	13.98	304.37	5,580.3	-52.4	-29.0	11.4	11.25	11.25	-0.38
5,614.0	17.67	303.72	5,611.1	-47.5	-36.3	19.7	11.54	11.53	-2.03
5,646.0	20.58	306.95	5,641.3	-41.4	-44.8	29.7	9.67	9.09	10.09
5,678.0	20.75	310.22	5,671.3	-34.4	-53.6	40.3	3.64	0.53	10.22
5,709.0	21.90	310.82	5,700.1	-27.0	-62.2	50.7	3.78	3.71	1.94
5,741.0	24.71	310.14	5,729.5	-18.8	-71.8	62.4	8.82	8.78	-2.13
5,772.0	27.08	310.38	5,757.4	-10.1	-82.1	75.0	7.65	7.65	0.77
5,804.0	28.56	311.48	5,785.7	-0.3	-93.4	88.7	4.90	4.63	3.44
5,827.0	28.93	312.54	5,805.9	7.1	-101.6	98.8	2.74	1.61	4.61
5,859.0	30.34	311.48	5,833.7	17.7	-113.4	113.3	4.70	4.41	-3.31
5,891.0	33.15	310.26	5,860.9	28.7	-126.1	128.8	9.01	8.78	-3.81
5,922.0	36.84	309.66	5,886.3	40.1	-139.8	145.3	11.95	11.90	-1.94
5,954.0	40.45	309.20	5,911.3	52.8	-155.2	163.9	11.32	11.28	-1.44
5,985.0	44.32	307.65	5,934.2	65.8	-171.6	183.5	12.93	12.48	-5.00
6,016.0	48.28	306.23	5,955.6	79.3	-189.5	204.7	13.20	12.77	-4.58
6,047.0	52.41	305.85	5,975.4	93.3	-208.8	227.4	13.36	13.32	-1.23
6,079.0	56.80	305.60	5,993.9	108.5	-230.0	252.3	13.73	13.72	-0.78
6,108.0	61.00	305.30	6,008.9	122.9	-250.2	276.0	14.51	14.48	-1.03
6,138.0	65.30	303.90	6,022.4	138.1	-272.2	301.6	14.93	14.33	-4.67
6,169.0	69.10	301.90	6,034.4	153.6	-296.2	329.2	13.62	12.26	-6.45
6,201.0	72.50	299.10	6,045.0	168.9	-322.2	358.7	13.46	10.63	-8.75
6,233.0	76.00	297.00	6,053.6	183.4	-349.4	389.1	12.63	10.94	-6.56
6,262.0	79.40	294.80	6,059.8	195.8	-374.9	417.1	13.87	11.72	-7.59
6,294.0	82.50	292.70	6,064.9	208.5	-403.8	448.6	11.65	9.69	-6.56
6,331.0	85.56	289.02	6,068.7	221.6	-438.2	485.3	12.89	8.27	-9.95
6,362.0	87.67	287.62	6,070.5	231.3	-467.6	516.3	8.16	6.81	-4.52
6,392.0	88.46	287.05	6,071.6	240.3	-496.2	546.2	3.25	2.63	-1.90
6,425.0	89.87	287.03	6,072.0	249.9	-527.7	579.2	4.27	4.27	-0.06
6,457.0	90.66	286.52	6,071.9	259.2	-558.4	611.2	2.94	2.47	-1.59
6,488.0	90.84	286.34	6,071.5	267.9	-588.1	642.2	0.82	0.58	-0.58
6,520.0	91.10	286.89	6,070.9	277.1	-618.8	674.2	1.90	0.81	1.72

Wolverine Directional, LLC

Survey Report

Company:	Huntington Energy	Local Co-ordinate Reference:	Well CLU #5-13H
Project:	Rio Arriba (NM83C)	TVD Reference:	WELL @ 0.0ft (Original Well Elev)
Site:	Sec 33-T25N-R7W	MD Reference:	WELL @ 0.0ft (Original Well Elev)
Well:	CLU #5-13H	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 2003.21 Single User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
6,550.0	91.36	286.24	6,070.3	285.6	-647.5	704.2	2.33	0.87	-2.17
6,580.0	91.01	286.17	6,069.7	294.0	-676.3	734.2	1.19	-1.17	-0.23
6,612.0	90.40	285.70	6,069.3	302.8	-707.1	766.1	2.41	-1.91	-1.47
6,643.0	90.57	285.53	6,069.0	311.1	-736.9	797.1	0.78	0.55	-0.55
6,675.0	90.92	285.74	6,068.6	319.8	-767.8	829.1	1.28	1.09	0.66
6,707.0	89.78	285.84	6,068.4	328.5	-798.5	861.0	3.58	-3.56	0.31
6,737.0	89.60	285.39	6,068.6	336.5	-827.4	891.0	1.62	-0.60	-1.50
6,769.0	89.87	285.48	6,068.7	345.1	-858.3	923.0	0.89	0.84	0.28
6,801.0	88.99	286.00	6,069.0	353.7	-889.1	954.9	3.19	-2.75	1.63
6,833.0	89.16	285.97	6,069.6	362.6	-919.8	986.9	0.54	0.53	-0.09
6,864.0	89.43	286.03	6,069.9	371.1	-949.6	1,017.9	0.89	0.87	0.19
6,895.0	89.69	285.96	6,070.2	379.6	-979.4	1,048.9	0.87	0.84	-0.23
6,927.0	89.78	286.20	6,070.3	388.5	-1,010.2	1,080.9	0.80	0.28	0.75
6,959.0	90.22	286.10	6,070.3	397.4	-1,040.9	1,112.8	1.41	1.38	-0.31
6,990.0	89.60	285.91	6,070.4	406.0	-1,070.7	1,143.8	2.09	-2.00	-0.61
7,022.0	89.52	286.25	6,070.6	414.8	-1,101.5	1,175.8	1.09	-0.25	1.06
7,053.0	89.69	286.22	6,070.8	423.5	-1,131.2	1,206.8	0.56	0.55	-0.10
7,083.0	89.78	286.21	6,071.0	431.9	-1,160.0	1,236.8	0.30	0.30	-0.03
7,115.0	89.96	285.95	6,071.0	440.7	-1,190.8	1,268.8	0.99	0.56	-0.81
7,147.0	89.96	286.16	6,071.1	449.6	-1,221.5	1,300.7	0.66	0.00	0.66
7,179.0	90.13	285.75	6,071.0	458.4	-1,252.3	1,332.7	1.39	0.53	-1.28
7,211.0	90.40	286.30	6,070.9	467.2	-1,283.1	1,364.7	1.91	0.84	1.72
7,242.0	90.57	286.25	6,070.6	475.9	-1,312.8	1,395.7	0.57	0.55	-0.16
7,274.0	90.92	286.28	6,070.2	484.8	-1,343.5	1,427.7	1.10	1.09	0.09
7,305.0	89.96	285.54	6,070.0	493.3	-1,373.3	1,458.6	3.91	-3.10	-2.39
7,337.0	90.22	285.75	6,069.9	502.0	-1,404.2	1,490.6	1.04	0.81	0.66
7,369.0	90.40	285.47	6,069.7	510.6	-1,435.0	1,522.6	1.04	0.56	-0.88
7,401.0	90.66	285.72	6,069.5	519.2	-1,465.8	1,554.5	1.13	0.81	0.78
7,432.0	89.78	285.09	6,069.3	527.4	-1,495.7	1,585.5	3.49	-2.84	-2.03
7,464.0	89.87	285.43	6,069.4	535.8	-1,526.6	1,617.5	1.10	0.28	1.06
7,495.0	90.04	285.41	6,069.5	544.1	-1,556.4	1,648.4	0.55	0.55	-0.06
7,527.0	90.40	285.19	6,069.3	552.5	-1,587.3	1,680.4	1.32	1.13	-0.69
7,558.0	90.48	285.17	6,069.1	560.7	-1,617.2	1,711.4	0.27	0.26	-0.06
7,590.0	90.75	285.10	6,068.7	569.0	-1,648.1	1,743.3	0.87	0.84	-0.22
7,622.0	89.78	285.14	6,068.6	577.4	-1,679.0	1,775.3	3.03	-3.03	0.13
7,653.0	89.52	285.39	6,068.8	585.5	-1,708.9	1,806.2	1.16	-0.84	0.81
7,685.0	89.60	284.75	6,069.0	593.8	-1,739.8	1,838.2	2.02	0.25	-2.00
7,715.0	89.60	284.54	6,069.2	601.4	-1,768.8	1,868.1	0.70	0.00	-0.70
7,745.0	89.87	284.35	6,069.4	608.9	-1,797.9	1,898.1	1.10	0.90	-0.63
7,776.0	90.22	284.86	6,069.4	616.7	-1,827.9	1,929.0	2.00	1.13	1.65
7,808.0	90.40	284.81	6,069.2	624.9	-1,858.8	1,961.0	0.58	0.56	-0.16
7,840.0	90.66	285.02	6,068.9	633.1	-1,889.7	1,992.9	1.04	0.81	0.66
7,871.0	89.43	285.44	6,068.9	641.3	-1,919.6	2,023.9	4.19	-3.97	1.35
7,902.0	89.25	285.49	6,069.2	649.6	-1,949.5	2,054.8	0.60	-0.58	0.16
7,934.0	89.25	286.47	6,069.6	658.4	-1,980.3	2,086.8	3.06	0.00	3.06
7,965.0	89.34	286.70	6,070.0	667.2	-2,010.0	2,117.8	0.80	0.29	0.74
7,997.0	89.60	286.38	6,070.3	676.3	-2,040.7	2,149.8	1.29	0.81	-1.00
8,028.0	89.96	286.02	6,070.4	685.0	-2,070.4	2,180.8	1.64	1.16	-1.16
8,060.0	90.13	285.73	6,070.4	693.7	-2,101.2	2,212.8	1.05	0.53	-0.91
8,092.0	90.31	285.84	6,070.3	702.4	-2,132.0	2,244.7	0.66	0.56	0.34
8,123.0	90.48	286.45	6,070.1	711.0	-2,161.8	2,275.7	2.04	0.55	1.97
8,154.0	90.57	286.76	6,069.8	719.9	-2,191.5	2,306.7	1.04	0.29	1.00
8,186.0	91.01	286.84	6,069.4	729.2	-2,222.1	2,338.7	1.40	1.38	0.25
8,217.0	91.54	288.43	6,068.7	738.5	-2,251.7	2,369.7	5.41	1.71	5.13

Wolverine Directional, LLC

Survey Report

Company: Huntington Energy	Local Co-ordinate Reference: Well CLU #5-13H
Project: Rio Arriba (NM83C)	TVD Reference: WELL @ 0.0ft (Original Well Elev)
Site: Sec 33-T25N-R7W	MD Reference: WELL @ 0.0ft (Original Well Elev)
Well: CLU #5-13H	North Reference: True
Wellbore: Wellbore #1	Survey Calculation Method: Minimum Curvature
Design: Wellbore #1	Database: EDM 2003.21 Single User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,251.0	91.36	288.23	6,067.8	749.2	-2,283.9	2,403.7	0.79	-0.53	-0.59
8,283.0	91.63	288.33	6,067.0	759.3	-2,314.3	2,435.7	0.90	0.84	0.31
8,314.0	91.98	288.21	6,066.0	769.0	-2,343.7	2,466.6	1.19	1.13	-0.39
8,346.0	92.24	288.36	6,064.8	779.0	-2,374.1	2,498.6	0.94	0.81	0.47
8,378.0	91.28	288.44	6,063.8	789.1	-2,404.4	2,530.6	3.01	-3.00	0.25
8,410.0	91.45	288.39	6,063.1	799.2	-2,434.8	2,562.6	0.55	0.53	-0.16
8,441.0	90.40	288.43	6,062.6	809.0	-2,464.2	2,593.6	3.39	-3.39	0.13
8,473.0	90.48	288.01	6,062.3	819.0	-2,494.6	2,625.6	1.34	0.25	-1.31
8,505.0	90.75	287.96	6,062.0	828.9	-2,525.0	2,657.6	0.86	0.84	-0.16
8,536.0	89.43	287.09	6,061.9	838.2	-2,554.6	2,688.6	5.10	-4.26	-2.81
8,568.0	89.16	287.09	6,062.3	847.6	-2,585.2	2,720.6	0.84	-0.84	0.00
8,600.0	89.16	286.65	6,062.8	856.9	-2,615.8	2,752.6	1.37	0.00	-1.38
8,632.0	89.43	286.66	6,063.2	866.1	-2,646.4	2,784.6	0.84	0.84	0.03
8,663.0	89.69	286.59	6,063.4	875.0	-2,676.1	2,815.5	0.87	0.84	-0.23
8,695.0	89.78	287.44	6,063.6	884.3	-2,706.7	2,847.5	2.67	0.28	2.66
8,727.0	89.43	287.28	6,063.8	893.9	-2,737.3	2,879.5	1.20	-1.09	-0.50
8,758.0	89.52	287.03	6,064.1	903.0	-2,766.9	2,910.5	0.86	0.29	-0.81
8,790.0	90.04	287.52	6,064.2	912.5	-2,797.5	2,942.5	2.23	1.63	1.53
8,821.0	90.22	287.59	6,064.1	921.9	-2,827.0	2,973.5	0.62	0.58	0.23
8,853.0	92.07	288.14	6,063.5	931.7	-2,857.5	3,005.5	6.03	5.78	1.72
8,885.0	92.68	288.53	6,062.2	941.7	-2,887.8	3,037.5	2.26	1.91	1.22
8,917.0	93.03	288.40	6,060.6	951.9	-2,918.1	3,069.4	1.17	1.09	-0.41
8,948.0	93.39	288.04	6,058.8	961.5	-2,947.5	3,100.4	1.64	1.16	-1.16
8,980.0	92.42	288.81	6,057.2	971.6	-2,977.8	3,132.4	3.87	-3.03	2.41
9,012.0	92.59	288.88	6,055.8	982.0	-3,008.1	3,164.3	0.57	0.53	0.22
9,044.0	92.86	288.84	6,054.3	992.3	-3,038.3	3,196.3	0.85	0.84	-0.13
9,075.0	93.30	288.86	6,052.6	1,002.3	-3,067.6	3,227.2	1.42	1.42	0.06
9,107.0	92.15	288.70	6,051.1	1,012.6	-3,097.9	3,259.2	3.63	-3.59	-0.50
9,139.0	92.24	288.82	6,049.9	1,022.9	-3,128.2	3,291.2	0.47	0.28	0.38
9,171.0	91.45	288.97	6,048.8	1,033.2	-3,158.4	3,323.1	2.51	-2.47	0.47
9,202.0	90.13	288.99	6,048.4	1,043.3	-3,187.8	3,354.1	4.26	-4.26	0.06
9,234.0	90.13	288.47	6,048.3	1,053.6	-3,218.1	3,386.1	1.62	0.00	-1.63
9,266.0	90.48	288.45	6,048.2	1,063.7	-3,248.4	3,418.1	1.10	1.09	-0.06
9,297.0	89.34	288.92	6,048.2	1,073.6	-3,277.8	3,449.1	3.98	-3.68	1.52
9,329.0	89.34	289.17	6,048.6	1,084.1	-3,308.0	3,481.1	0.78	0.00	0.78
9,361.0	89.52	288.96	6,048.9	1,094.5	-3,338.3	3,513.1	0.86	0.56	-0.66
9,392.0	89.78	288.92	6,049.1	1,104.6	-3,367.6	3,544.1	0.85	0.84	-0.13
9,424.0	90.04	289.14	6,049.2	1,115.0	-3,397.8	3,576.1	1.06	0.81	0.69
9,456.0	89.16	289.18	6,049.4	1,125.5	-3,428.1	3,608.1	2.75	-2.75	0.13
9,487.0	89.16	289.45	6,049.8	1,135.8	-3,457.3	3,639.1	0.87	0.00	0.87
9,519.0	89.43	289.07	6,050.2	1,146.3	-3,487.5	3,671.1	1.46	0.84	-1.19
9,551.0	88.46	289.38	6,050.8	1,156.9	-3,517.7	3,703.1	3.18	-3.03	0.97
9,582.0	88.72	289.33	6,051.6	1,167.1	-3,547.0	3,734.1	0.85	0.84	-0.16
9,614.0	88.99	289.31	6,052.2	1,177.7	-3,577.2	3,766.0	0.85	0.84	-0.06
9,646.0	88.99	289.35	6,052.8	1,188.3	-3,607.4	3,798.0	0.12	0.00	0.13
9,678.0	89.25	289.57	6,053.3	1,199.0	-3,637.5	3,830.0	1.06	0.81	0.69
9,709.0	89.52	289.61	6,053.6	1,209.4	-3,666.7	3,861.0	0.88	0.87	0.13
9,741.0	89.87	289.90	6,053.8	1,220.2	-3,696.8	3,893.0	1.42	1.09	0.91
9,773.0	90.22	289.84	6,053.8	1,231.1	-3,726.9	3,925.0	1.11	1.09	-0.19
9,804.0	90.84	289.74	6,053.5	1,241.6	-3,756.1	3,956.0	2.03	2.00	-0.32
9,836.0	90.22	289.34	6,053.2	1,252.3	-3,786.3	3,987.9	2.31	-1.94	-1.25
9,868.0	90.22	289.03	6,053.0	1,262.8	-3,816.5	4,019.9	0.97	0.00	-0.97
9,899.0	89.52	289.46	6,053.1	1,273.0	-3,846.8	4,050.9	2.65	-2.26	1.39
9,931.0	89.69	289.86	6,053.3	1,283.8	-3,875.9	4,082.9	1.36	0.53	1.25

Wolverine Directional, LLC

Survey Report

Company: Huntington Energy	Local Co-ordinate Reference: Well CLU #5-13H
Project: Rio Arriba (NM83C)	TVD Reference: WELL @ 0.0ft (Original Well Elev)
Site: Sec 33-T25N-R7W	MD Reference: WELL @ 0.0ft (Original Well Elev)
Well: CLU #5-13H	North Reference: True
Wellbore: Wellbore #1	Survey Calculation Method: Minimum Curvature
Design: Wellbore #1	Database: EDM 2003.21 Single User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,963.0	89.96	289.83	6,053.4	1,294.6	-3,906.0	4,114.9	0.85	0.84	-0.09
9,994.0	90.22	290.44	6,053.4	1,305.3	-3,935.1	4,145.9	2.14	0.84	1.97
10,026.0	89.34	290.54	6,053.5	1,316.5	-3,965.1	4,177.9	2.77	-2.75	0.31
10,057.0	89.34	290.68	6,053.9	1,327.4	-3,994.1	4,208.8	0.45	0.00	0.45
10,089.0	89.34	290.66	6,054.2	1,338.7	-4,024.0	4,240.8	0.06	0.00	-0.06
10,121.0	89.78	290.92	6,054.5	1,350.1	-4,053.9	4,272.7	1.60	1.38	0.81
10,152.0	88.99	291.07	6,054.8	1,361.2	-4,082.9	4,303.7	2.59	-2.55	0.48
10,184.0	88.99	291.10	6,055.4	1,372.7	-4,112.7	4,335.7	0.09	0.00	0.09
10,216.0	89.25	291.20	6,055.9	1,384.2	-4,142.6	4,367.6	0.87	0.81	0.31
10,247.0	89.34	291.31	6,056.2	1,395.5	-4,171.5	4,398.6	0.46	0.29	0.35
10,279.0	89.52	291.07	6,056.6	1,407.0	-4,201.3	4,430.5	0.94	0.56	-0.75
10,311.0	89.78	291.34	6,056.8	1,418.6	-4,231.1	4,462.5	1.17	0.81	0.84
10,343.0	89.96	291.51	6,056.8	1,430.3	-4,260.9	4,494.4	0.77	0.56	0.53
10,374.0	90.40	291.37	6,056.7	1,441.6	-4,289.8	4,525.3	1.49	1.42	-0.45
10,406.0	90.66	291.31	6,056.4	1,453.3	-4,319.6	4,557.3	0.83	0.81	-0.19
10,437.0	90.75	291.19	6,056.1	1,464.5	-4,348.5	4,588.2	0.48	0.29	-0.39
10,469.0	89.43	290.53	6,056.0	1,475.9	-4,378.4	4,620.2	4.61	-4.13	-2.06
10,501.0	89.43	290.49	6,056.3	1,487.1	-4,408.3	4,652.2	0.12	0.00	-0.13
10,532.0	88.64	290.02	6,056.9	1,497.8	-4,437.4	4,683.1	2.97	-2.55	-1.52
10,564.0	88.64	290.35	6,057.6	1,508.9	-4,467.4	4,715.1	1.03	0.00	1.03
10,595.0	88.72	290.31	6,058.3	1,519.6	-4,496.5	4,746.1	0.29	0.26	-0.13
10,627.0	88.90	290.27	6,059.0	1,530.7	-4,526.5	4,778.1	0.58	0.56	-0.13
10,659.0	89.16	290.04	6,059.5	1,541.8	-4,556.5	4,810.0	1.08	0.81	-0.72
10,690.0	89.25	290.15	6,060.0	1,552.4	-4,585.7	4,841.0	0.46	0.29	0.35
10,722.0	89.43	290.01	6,060.3	1,563.4	-4,615.7	4,873.0	0.71	0.56	-0.44
10,770.0	89.69	289.95	6,060.7	1,579.8	-4,660.8	4,921.0	0.56	0.54	-0.13
Last MWD Survey									
10,850.0	89.69	289.95	6,061.1	1,607.1	-4,736.0	5,000.9	0.00	0.00	0.00
Proj to TD - CLU 5-13H PBHL									

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
5,400.0	5,399.6	-60.1	-14.1	Tie on to GYRO
5,423.0	5,422.6	-60.3	-14.5	First MWD Survey
10,770.0	6,060.7	1,579.8	-4,660.8	Last MWD Survey
10,850.0	6,061.1	1,607.1	-4,736.0	Proj to TD

Checked By: _____	Approved By: _____	Date: _____
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Huntington Energy

Project: Rio Arriba (NM83C)
 Site: Sec 33-T25N-R7W
 Well: CLU #5-13H
 Wellbore: Wellbore #1
 Design: 09-08-13



Azimuths to True North
 Magnetic North: 9.52°

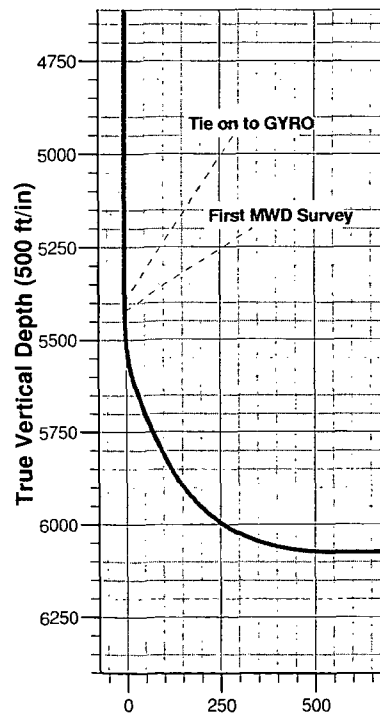
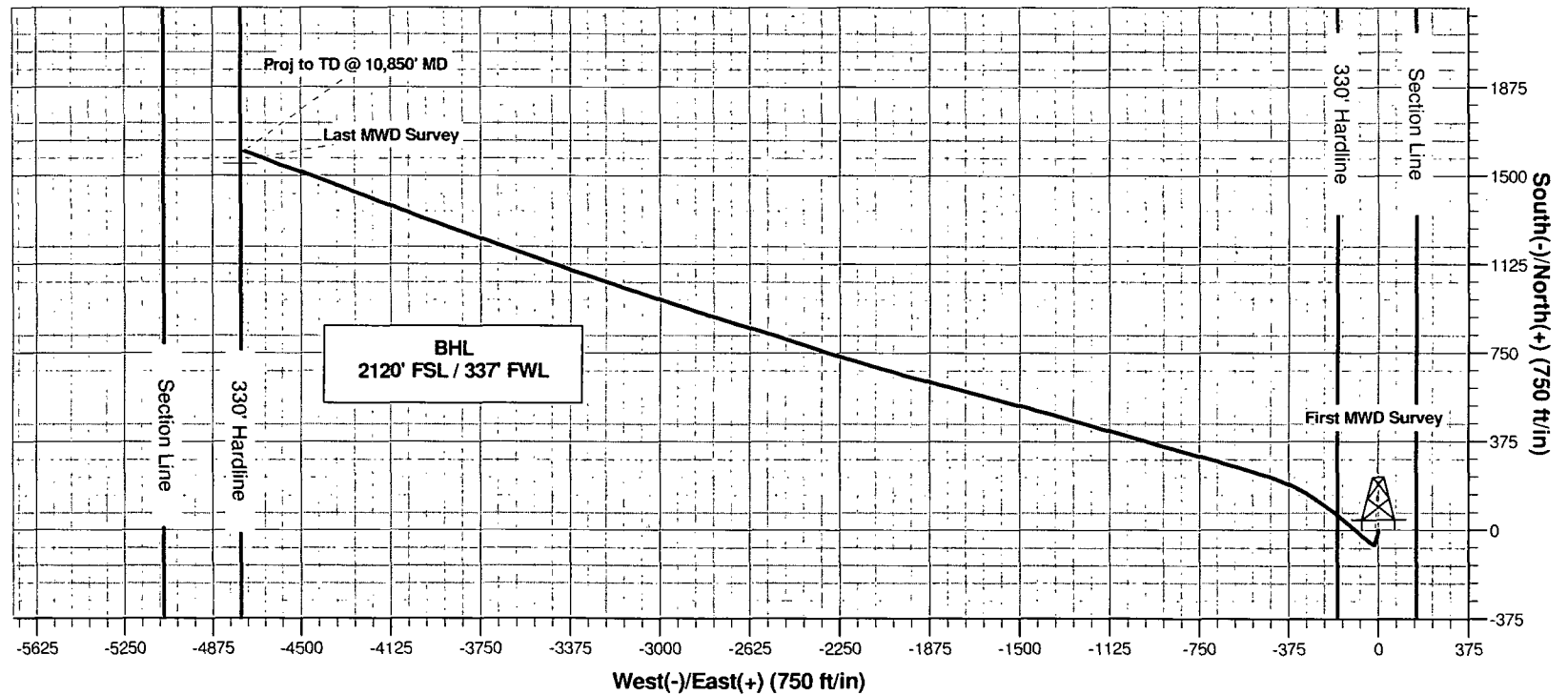
Magnetic Field
 Strength: 50382.4snT
 Dip Angle: 63.11°
 Date: 07/09/2013
 Model: IGRF2010

OIL CONS. DIV DIST. 3
 DEC 11 2013

WOLVERINE
 DIRECTIONAL

WELL DETAILS: CLU #5-13H

+N/-S	+E/-W	Northing	Ground Level:	Easting	Latitude	Longitude
0.0	0.0	1949822.21	0.0	1251138.47	36°21' 4.860 N	107°34' 19.020 W
SHL: 505' FSL / 158' FEL						
BHL: 2120' FSL / 337' FWL						



Vertical Section at 288.07° (500 ft/in)